

Course Structure and Syllabi
of
Pre-Ph.D COURSE WORK
in
ECONOMICS



Department of Economics
Deen Dayal Upadhyaya Gorakhpur University
Gorakhpur

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Department of Economics

DDU Gorakhpur University, Gorakhpur

(Faculty of Commerce)

Syllabus of Pre-Ph.D. Course in Economics

Every student admitted in Economics for the Pre-Ph. D. programme will be required to pass a course work of minimum 12 credits. The division of 12 credits course work is in two categories. Category-A (7 credits) courses are *compulsory* for all Ph. D. students of Economics. Category-B (5-credits) courses are optional.

Course Nature	Course Code	Courses	Credit
A-Compulsory Course (All Compulsory)			
Compulsory Course	RPE 700	Research and Publication Ethics	1+1
	ECO 601	Research Methodology	05
B-Optional Courses (Any one course to be selected)			
Subject Specific Areas	ECO 602	International Economics	05
	ECO 603	Issues in Monetary Economics	05
	ECO 604	Demography	05
	ECO 605	Econometric Methods	05
	ECO 606	Agricultural & Rural Economics	05
	ECO 607	Environmental Economics	05
	ECO 608	Economy of Uttar Pradesh: Challenges & Prospects	05
Total			12 Credits

Programme Specific Outcomes

- PSO 1. To explore new and cutting- edge approaches within the specific subject area.
- PSO 2. To develop innovative research methods, techniques and perspectives that can have potential to advance knowledge.
- PSO 3. To understand the theoretical concepts of Economic theories and their application in research.
- PSO 4. To familiarise the students about issues of ethics in economic thinking and practice.
- PSO 5. For awareness about publication ethics and research conducts and misconducts.
- PSO 6. To have an understanding of quantitative and qualitative methods of research.
- PSO 7. To have a review of published research in relevant fields.
- PSO 8. To have better understanding of specific research area.
- PSO 9. Familiarise and acquaint with the characteristics of the economy of Uttar Pradesh.

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(A-Compulsory Courses)

RESEARCH AND PUBLICATION ETHICS

(Course Code: RPE-700)

(Credits: 1+1)

Unit –I (Theory) Philosophy and Ethics, Introduction to Philosophy: definition, nature, scope, concept, branches Ethics: definition, moral philosophy, nature of moral judgment and reactions. Scientific Conduct, Research ethics, research Intellectual honesty and research integrity, copyright, Scientific misconduct: falsification, fabrication, and Plagiarism (FFP), Redundant Publication: duplication and overlapping publication salami slicing, Selective reporting, and misrepresentation of data

Unit –II (Theory): Publication Ethics: definition, introduction, and importance Best practice/standard setting initiative and guidelines: COPE, WAME, etc. Conflict and interest, Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice versa, type, Violation of publication ethics, authorship and contributor-ship, Predatory publisher and journals, Avoiding Plagiarism. Preparing documents for MoUs, Confidentiality Agreements

Unit –III (Practice) Open access publication and initiatives SHERPA/RoMEO online resource to check publisher copyright and self-archiving policies, Software tool to identify predatory publication developed by SPPU Journal finder/journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer, Journal Suggester, etc. Publication Misconduct, Subject Specific Ethical Issues FFP, authorship Complaints and appeals: examples and fraud from India and abroad. Software tools: Use of plagiarism software like Turnitin, Urkund, and other open-source software tools.

Unit –IV (Practice): Database and research metrics. Indexing database, Citation database: Web of Science, Scopus, etc. Research metrics: Impact factor of Journal as per journal citation report, SNIP, SJR, IPP, Cite Score Metrics: h-index, g-index, i-10 index, altmetrics.

Books Recommended:

- (1) Bird, A (2006). Philosophy of Science. Routledge.
- (2) MacIntyre, Alasdair (1967) A short history of Ethics, London
- (3) P. Chaddah, (2018) Ethics in Competitive Research: Do not get scooped; do not get plagiarized, ISBN:978-9387480865
- (4) National Academy of Sciences, national Academy of Engineering and Institute of Medicine (2009) On Being A Scientist: A guide to Responsible conduct in Research. Third Edition. National Academics Press.
- (5) Resnik, D. B. (2011). What is ethics in research & why is it important? National Institute of Environmental Health Sciences, 1-10. Retrieved from <http://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm>
- (6) Beall, J. (2012). Predatory publishers are corrupting open access. Nature, 489 (7415), 179. <https://doi.org/10.1038/489179a>
- (7) Indian National Science Academy (INSA), Ethics in Science Education, Research and Governance (2019), ISBN:978-81-939482-1-7. http://www.insaindia.res.in/pdf/Ethics_Book.pdf

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Research Methodology

Course Code: ECO 601

Credits: 05

Unit I: Research Methodology: Meaning and Objectives of Research, Motivation in Research, Types of Research, Significance of Research, Research Method Vs. Methodology, Research Process, Criterion of Good Research

Unit II: Research Problem: Definitions of Research Problem, Selecting the Research Problem, Techniques involved in Defining a Problem; Research Design: Meaning of Research Design, Need for Research Design, Features of a Good Design, Important Concepts Relating to Research Design, Different Research Designs, Survey of Literature.

Unit III: Theoretical Statistical Distribution: Binomial Distribution, Poisson Distribution and Normal Distribution -- Properties and Uses. Sampling Theory: Universe and Sample, Parameter and Statistic, Sampling Distribution, Standard Error, Sampling Error, Methods of Sampling- Probability and Non Probability.

Unit IV: Elements of Hypothesis Testing: Concept of Hypothesis, Null and Alternative Hypothesis, Type I and Type II Error, Level of Significance and Critical Region, One-tail and Two-tail Tests, Procedure for Hypothesis Testing, Test of Significance: Large and Small Sample Tests, Chi Square Test and Goodness of fit, Contingency Table and Goodness of fit

Unit V: Computer Application: Application of Computer in Economic Research-- MS Word, MS Excel, SPSS.

Books Recommended:

- Kothari, C. R.: Research Methodology: Methods and Techniques, New Age International Publisher, New Delhi
- Gupta, S.C. and V.K. Kapoor: Fundamentals of Mathematical Statistics (eighth edition), S. Chand & Sons Publications, New Delhi.
- Gupta, S.C. and V.K. Kapoor: Fundamentals of Applied Statistics (third edition), S. Chand & Sons Publications, New Delhi.
- Gupta, S.C. and V.K. Kapoor: Elements of Mathematical Statistics (fourth edition), S. Chand & Sons Publications, New Delhi.
- Elhance, D.N.: Fundamentals of Statistics (Hindi Ed.)
- Agarwal, D.R.: Statistics for Economists, Vrinda Publications, New Delhi.
- Gupta, B.N.: Statistics (fourth edition), Sahitya Bhawan Publication, Agra (UP).
- शुक्ला, एस0एम0 एवं एस0पी0 सहाय: सांख्यिकी विश्लेषण, साहित्य भवन पब्लिकेशन, आगरा, 30प्र01

Course Outcomes:

- CO 1. Enables the student to understand the Introduction of research methodology, Research Problem and Research Design
- CO 2. Enables the student to understand the various types of Theoretical Statistical Distribution such as Binomial Distribution, Poisson Distribution, Normal Distribution etc.
- CO 3. Enables the student to understand Sampling Theory and various methods of sampling.
- CO 4. Enables the student to understand the application of computer in economic Research.

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International Economics

Course Code: ECO 602

Credits: 05

Unit I: Studies in International Trade: Theoretical Perspectives, Emerging Issues in Modern Trade Theory, Intra-Industry Trade, Empirical Studies on Trade Theory, Measurement and Analysis of Foreign Trade.

Unit II: Studies in Foreign Trade Policy: Various Tools of Foreign Trade Policy and their Economic Effects—Tariff and Non Tariff Barriers and their Economic Implications, Theory of Regional Economic Integration, Emerging Issues in Global Trading Environment.

Unit III: Studies in International Macroeconomic Issues: National Income in an Open Economy, Balance of Payment Account, BoP Adjustment Process.

Unit IV: Foreign Exchange Rate, Determination of Foreign Exchange Rate, Various Exchange Rate System.

Unit V: Exchange Rate and Monetary System, Emerging Monetary System, Optimum Currency Area.

Books Recommended:

- Sodersten, Bo and Reed, G.: *International Economics* (third edition), Macmillan, London.
- Krugman, P., Obstfeld, M and Melitz, M.J.: *International Economics – Theory and Policy* (ninth edition), Pearson Education Ltd, England.
- Salvatore, D: *International Economics* (seventh edition), John Wiley & Sons, New York.
- Kindleberger, C.P.: *International Economics* (eighth edition), Richard. D. Irwin Inc, Homewood.
- Kenan, P.B.: *The International Economy* (fourth edition), Cambridge University Press, UK.
- Mannuar, H.G.: *International Economics* (second edition), Vikas Publication House Pvt. Ltd., Noida (UP).
- Ohlin, B.: *Interregional and International Economics*, Oxford University Press, London.
- Ellsworth, P.T. and Leith, J.C.: *The International Economy* (sixth edition), Macmillan Publication, New York.
- Haberler, G.V.: *The Theory of International Trade*, W. Hodge & Company, London.
- Ellis, I I. S. and Metzler (ed.): *Readings in the Theory of International Economics*.

Course Outcomes:

- CO 1.** Enables the student to understand the Various theories of international trade such as classical, neo-classical and H-O theories of international trade.
- CO 2.** Enables the student to understand the Different tools and effects of various Commercial Policy such as Tariff, Quota and Dumping, International Trading Environment – GATT and WTO.
- CO 3.** Enables the student to understand the Various aspects of Balance of Payments Accounts as well as Foreign Exchange Market, Nature and causes of BoP Problems and Process of Determination of Exchange Rate.

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Issues in Monetary Economics

Course Code: ECO 603

Credits: 05

Unit I: Monetary Issues in Economics; significance of Monetary System, Types of Money and changing its structure, Approaches of demand for money; Classical approach to demand for money; Keynes' approach to demand for money.

Unit II: Post Keynesian approach to demand for money (Friedman, Buamol, Tobin); Keynesianism and Monetarism. Theories of Value of Money; Classical, Neo Classical, Fundamental Equation of Keynes and Income Expenditure Theory.

Unit III: Changes the value of money and its impact: Inflation-causes, types, effects and control Classical, Keynesian and Monetarist approach to inflation; Structural theory of inflation;; wicksell's theory of Price fluctuations.

Unit IV: Philips curve analysis; Samuelson and Solow's contribution- the natural rate of unemployment hypothesis; Tobin's modified Philips curve; Adaptive expectations and rational expectations;

Unit V: Theoretical and empirical Concept of Money Supply: - Exogenous and endogenous Money supply, High-powered money and money multiplier theory.

Books Recommended:

- Keynes, J.M., Treatise on Money.
- Keynes, J.M., The General Theory of Employment Interest and Money
- Halm, G.N., Monetary Theory ,
- Kurihara, K., Monetary Theory and Public Policy,
- Hansen, B., A Study in the Theory of Inflation, ,
- Dillard, D.H., The Economics of J.M. Keynes

Course Outcomes:

- CO 1.** Enables the student to understand the Nature, scope and significance of Monetary Economics, Neutrality and Non - neutrality of money and role of Money in closed as well as in open economy.
- CO 2.** Enables the student to understand the Various theories of demand for money and Types and causes if inflation in any economy.
- CO 3.** Enables the student to understand the Various methods of Measurement of value of money.

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Demography

Course Code: ECO 604

Credits: 05

Unit I: Demographic Analysis: Concept, Scope, Subject Matter, Importance and Tools, Demographic Dividend, Age Structure and Population Density.

Unit II: Demographic features and Trends in India: Inter-State Comparison, Demographic Features of Uttar Pradesh; Population Policy of India; Social Impact of National Population Policy.

Unit III: Demographic Measurements: Meaning, Difference between Fertility and Fecundity, Determinants and Measurements- Fertility Rates: CBR, GFR, SFR, TFR, and Reproduction Rates: GRR, NRR; Mortality and Morbidity and Health: Concepts Causes of Death, Importance and Measurement- CDR, ASDR, IDR, SDR, Correction Factor.

Unit IV: Migration: Meaning, Motives and Factors Encouraging Migration, Classification, Theories and Models (Lewis Model of Unlimited Supply of Labour, Todaro Model of Migration, Lee's Theory of Migration); International Migration of High Quality Man Power: Brain Migration; Industrialization and Migration.

Unit V: Urbanization, Cycle of an Urbanization; Urbanization in India; Population, Economy and Environment; Human Resources Development and Economic Development.

Books Recommended:

- Bhende, A., and Kanitkar T. (1994). Principles of Population Studies, 5th Edition, Bombay: Himalaya Publishing House.
- Barclay, George (1958). Techniques of Population Analysis New York: John Wiley & Sons, Inc.
- Thompson, S.W. and T Lewis: Population Problems
- Srinivasan, K. (1998). Basic Demographic Techniques and Applications, New Delhi: Sage.
- Misra. B.D (1995). An Introduction to the Study of Population, Second Edition, New Delhi: South Asian Publishers Pvt. Ltd.
- Joseph. J. Spengler and Dudley Ducan, Population theory and Policy
- Pathak K.B and Fauzdar Ram (1992). Techniques of Demographic Analysis Bombay: Himalaya Publishing House.
- Bouge, D.J. (1971). Principles of Demography, John Wiley, New York.
- Mukherji, S. (2013). Migration in India: Links to Urbanization, Regional Disparities, and Development Policies, Rawat Publication.

Course Outcomes:

CO 1. Enables the student to understand the Concept, Scope, Subject Matter and Important Tools of Demographic Analysis as well as Demographic Measurements.

CO 2. Enables the student to understand the Demographic features and Trends in India: Inter-State Comparison and Demographic Features of Uttar Pradesh.

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Econometric Methods

Course Code: ECO 605

Credits: 05

Unit I: Methodology of Econometrics, Economics and Econometrics, Method of Ordinary Least Squares, Two-Variable Linear Regression Model, Best Linear Unbiased Estimator, Significance Tests of Parameters, Maximum Likelihood Estimators -- MOM and GMM Estimators.

Unit II: Multivariable Linear Regression Model -- Estimation and Properties of Estimators, Test of Overall Significance of the Regression.

Unit III: Heteroscedastic Disturbance, Problem of Autocorrelation, Generalized Least Squares: Aitken's Procedure, Properties of GLS Estimators.

Unit IV: Problem of Misspecification and Multicollinearity, Restricted Least Squares. Instrumental Variables, Errors in Variables, Dummy Variables, Ridge Regression

Unit V: Simultaneous Equation Model, Structural and Reduced Form, Identification Problem -- Rank and Order Condition, Simultaneous Equation Bias, Indirect Least Squares Method, Estimation of Production and Cost Function.

Books Recommended:

- Gujarati, D.N.: *Basic Econometrics* (fourth edition), McGraw Hill.
- Johnston, J.: *Econometric Methods*, McGraw Hill.
- Madala, G.S.: *Econometrics* (third edition), McGraw Hill.
- Klein, L.R.: *Text Book of Econometrics*
- Theil, H.: *Principles of Econometrics*
- Kmenta, J.: *Elements of Econometrics*
- Intriligator, M.D.: *Econometric Models -- Techniques and Applications*.

Course Outcomes:

- CO 1. Enables student to understand methodology of econometrics and various Tools of mathematical analysis of economic problems.
- CO 2. It develops quantitative analytical skill to solve economic problems of real worlds.
- CO 3. It develops skill to give practical quantitative estimates of production functions, demand, demand forecasting, etc.
- CO 4. It prepares students for mathematical treatments of economic issues in modern times.

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Agricultural and Rural Economics

Course Code: ECO 606

Credits: 05

Unit I: Importance of agriculture in Indian Economy, Role of agriculture in Rural Development, Share of agriculture in the economy, Farm Size & Productively Relationship.

Unit II: Agriculture Production: Types and Law of Returns, Factor-Product Relationship, Factor-Factor Relationship and Product-Product Relationship.

Unit III: Institutional and Technological Agricultural Reforms: Land reforms and economic development; Co-operative and Collective Farming; Technological reforms; Green Revolution, Farm Machanisation

Unit IV: Rural development & Basic Issues: - Rural Finance- Institutional and non-institutional sources of agricultural finance. Role of irrigation in rural development and Agricultural Development. Rural and Agricultural development through Agricultural Marketing

Unit V: Food Policy in India: Food Security and Public Distribution System. WTO and Agricultural Issues.

Books Recommended:

- K. Bhardwaj : Production conditions in Indian Agriculture
- A. Rudra : Relative rates of growth; Agriculture & Industry
- Kotovsky : Agrarian reforms in India.
- P.C. Joshi : Land Reforms in India
- CH. Hanmantha Rao : Technological Changes and Distribution of Gains in Indian Agriculture
- Robert Chambers : Rural Development

Course Outcomes:

- CO 1. Enables the Ph.D. student to understand the Importance and Role of Agriculture in rural development, Share of agriculture in the economy and Agriculture Production and Productivity-Effects of Reforms.
- CO 2. Enables the Ph.D. student to understand the Rural Finance- Institutional and non-institutional sources of agricultural finance, Rural and Agricultural development through Agricultural Marketing and WTO and Agricultural Issues.
- CO 3. Enables the Ph.D, student to understand the Problems of Unemployment and under employment in agriculture sector and Poverty and Unemployment Alleviation programmes which are running for Rural Development as well as for agricultural development.

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Environmental Economics

Course Code: ECO 607

Credits: 05

Unit I: Environmental Economics: Nature, Definition and background. Environment Economy Interrelationship, Material balance model, environmental crisis. Economic Development and Environmental Quality.

Unit II: Market failure in case of environment and its consequences, Role of government in restoring efficiency, regulating instruments: Command and Control and Market-Based Instruments.

Unit III: Brief discussion of environmental valuation techniques; Use and Non-use Value, Environmental Demand Theory, Revealed Preference and Stated Preference Methods of Valuation.

Unit IV: Sustainable Development: Background of issue of Limits to growth, Normative issue, components, approaches and indicators of Sustainability, Sustainable Development Goals.

Unit V: International Environmental Problems- Economics of Global Warming, Economics of Biodiversity Conservation, Institutional Policies of these Issues.

Books Recommended:

- Hemple, Lamont C., Environmental Economics: The Global Challenge. First East West Press, Edinburgh.
- Ahmad M. Hussen: Principle of Environmental Economics. Poulledge and Taylor & Francis Group.
- R.N. Bhattacharya: Environmental Economics, Air India Perspective, Oxford University Press.
- Maya Maheshwari: Paryavarniya Arthshastra – Ek Bhartiya Paripeksha, Har Aanand Publications, New Delhi.
- Thomas & Callan: Environmental Economics.
- Nick Hanley, F. Shogran & J. Whitel: Environmental Economics Theory and Practice, Oxford University Press.
- K.V. Pavitran: A Text Book of Environmental Economics, New Age India Publications.
- U. Sarkar: Environmental Economics (Edited)
- Erach Bharucha: Environmental Studies, orient Lorgman.
- Karpagam. M., A Text Book Of Environmental Economics, sterling Publisher Home.
- Nahoral Environmental Policy 2006, CSO, India.

Course Outcomes:

- CO 1. Students can learn and understand environment economy relationship and economics solution to environmental problems.
- CO 2. Students can understand the ill effects of economic development experienced in past.
- CO 3. Understand the importance of environment friendly production and consumption for sustainable development.

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Economy of Uttar Pradesh: Challenges and Prospects

Course Code: ECO 608

Credits: 05

Unit I: Economy of Uttar Pradesh: Basic of Features of Agricultural, Industrial and Service Sectors, State Domestic Product.

Unit II: Human Development in UP: Health, Education and Other Indicators of Human Development, Human Development and Economic Development.

Unit III: Poverty, Infrastructure, Employment Generation Programme, Women Empowerment.

Unit IV: Economic Backwardness of UP: Inter-state Analysis; Regional Disparities in Economic Development of Uttar Pradesh.

Unit V: Problems and Obstacles of Development: Prospects and Programmes for Development of UP. Economy of Eastern Region of Uttar Pradesh: Basic Features, Problems and Prospects of Development; New Initiatives of Development in Uttar Pradesh.

Books Recommended:

- Statistical Diaries: Annual issues, Government of UP.
- District Wise Development Indicators: State Planning Institute Government of Uttar Pradesh.
- Human Development Report of Uttar Pradesh.
- Annual Report of State Planning Institute, Government of Uttar Pradesh.
- All the previous, Annual Plans and Five-Year Plan Documents, Government of Uttar Pradesh.
- Publications of Economic and Statistic Division, State Planning Institute, Government of Uttar Pradesh.

Course Outcomes:

- CO 1.** Students can understand the status and realities of different sectors of economy of UP.
- CO 2.** Students can understand the economic features of different regions of economy of UP.
- CO 3.** Students can understand the human resource development in up and can suggest measures to promote the development of Balanced areas.

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